

ABSTRACT

A method, and apparatus implementing the method, of selecting a bit load  $b$  for a channel in a carrier system. The carrier system encodes data based on a constellation of points. Each point represents a tuple of data. The constellation has a self-similarity property. The bit load for the channel is selected based on the self-similarity property of the constellation. In an alternate embodiment, the method and apparatus are used to determine the bit load of the sub-channels in a multi-carrier system.